

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Orwar, et al.

U.S.S.N.: Not Yet Assigned

Art Unit: Not Yet Assigned

FILED: Herewith

Examiner: Not Yet Assigned

FOR: SYSTEM AND METHOD FOR OBTAINING AND MAINTAINING HIGH-RESISTANCE SEALS IN PATCH CLAMP RECORDINGS

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir/Madam

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail Label No. EV 343731527 US and is addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, Va 22313-1450 on August 20, 2003.

By:   
Helen Murray Tarbi

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications or other information submitted for consideration by the Office are listed on PTO-1449, attached hereto.

II. COPIES

- a. ☒ Submitted herewith is a legible copy of (i) each U.S and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.
- b. ☐ Each of the patents, publications or other information listed on the attached PTO-1449 was previously cited by or submitted to the USPTO in connection with U.S.S.N.: \_\_\_\_\_, to which the subject

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application claims the benefit of the earlier filing date. As such, a copy of each is not included herewith pursuant to 37 C.F.R. § 1.98(d).

III. CONCISE EXPLANATION OF THE RELEVANCE  
(check at least one box)

- a. ☒ Except as may be indicated below in (b), all of the patents, publications or other information are in the English language or were cited in an English language Search Report, a copy of which is attached hereto (concise explanation not required).
- b. ☐ A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows (following also previously cited by or submitted to the USPTO in connection with U.S.S.N.:
- ☐ English translation (partial) for reference ☐.
  - ☐ English abstract for reference ☐.
  - ☐ English translation of search report/ official communication.
  - ☐ Copy of PCT/EPO Search Report.
- c. ☐ The following additional information is provided for the Examiner's consideration:
- ☐ Copy of EPO Search Report.
  - ☐ Copy of PCT Search Report.
  - ☐ Copy of Official Communication from the \_\_\_\_\_ Patent Office.
  - ☐ English translation of search report/ official communication.

**FEEs**

IV. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b)  
(check one box)

- a. ☒ within three months of the filing date of a national application (37 C.F.R. § 1.97(b) (1)). No fee or certification is required.
- b. ☐ within three months of the date of entry of the national stage as set forth in §1.491 in an international application (37 C.F.R. § 1.97(b) (2)). No fee or certification is required.
- c. ☐ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b) (3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below, or, if no certification has been made, charge our deposit account a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).

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V. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):  
(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c) (1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c) (2)).

- a. ☐ No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).
- or
- b. ☐ See the certification below. No fee is required.

VI. CERTIFICATION UNDER 37 C.F.R. § 1.97(e) (check only one box)

The undersigned hereby certifies that

- a. ☐ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.
- c. ☐ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned certifies that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

VII. FEE PAYMENT (check one)

- ☐ Enclosed please find a check in the amount of \$180.00 for the above-indicated fee.
- ☐ Please charge Deposit Account No. 04-1105 in the amount of \$180.00 for the above-indicated fee.

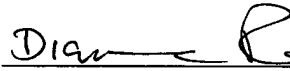
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**X** No fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule, with a petition if necessary, and charge the appropriate fee to Deposit Account No. 04-1105.

Respectfully submitted,

Date: August 20, 2003

  
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<b>FORM PTO-1449</b>		<b>DOCKET NO:</b> 58072 (47137)		<b>SERIAL NO.:</b> Not yet assigned			
<b>INFORMATION DISCLOSURE STATEMENT</b>		<b>APPLICANT:</b> Orwar, t al.					
		<b>FILING DATE:</b> August 20, 2003		<b>GROUP NO.</b> Not yet assigned			
<b>UNITED STATES PATENT DOCUMENTS</b>							
<b>EXAM. INITIALS</b>		<b>DOCUMENT NUMBER</b>	<b>DATE</b>	<b>NAME</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>FILING DATE IF APPROPRIATE</b>
	A1	US2003/0022268A1	1/30/2003	Lepple-Wienhues	435	29	
	A2	US2002/0074227A1	6/20/2002	Nisch et al.	204	450	
	A3	US2003/0009112A1	1/9/2003	Hammerle et al.	600	547	
<b>FOREIGN PATENT DOCUMENTS</b>							
		<b>DOCUMENT NUMBER</b>	<b>DATE</b>	<b>COUNTRY</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>TRANSLATION YES/NO</b>
<b>OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)</b>							
	C1	Sinclair, et al. "A Cell-Based Bar Code Reader for High-Throughput Screening of Ion Channel-Ligand Interactions", Anal. Chem. 2002, 74, 6133-6138.					
	C2	Farre, et al., "Screening of Ion Channel Receptor Agonists Using Capillary Electrophoresis-Patch Clamp Detection with Resensitized Detector Cells", Anal. Chem. 2001, 73, 1228-1233.					
	C3	Stromberg, et al., "Microfluidic Device for Combinatorial Fusion of Liposomes and Cells", Anal. Chem. 2001, 73, 126-130.					
	C4	Jardemark, et al., "Screening of Receptor Antagonists Using Agonist-Activated Patch Clamp Detection in Chemical Separations", Anal. Chem. 1998, 70, 2468-2474.					
	C5	Fishman, et al., "Cell-to-Cell Scanning in Capillary Electrophoresis", Analytical Chemistry, Vol. 68, No. 7, April 1, 1996, 1181-1186.					
	C6	Fishman, et al., "Identification of receptor ligands and receptor subtypes using antagonists in a capillary electrophoresis single-cell biosensor separation system", Proc. Natl. Acad. Sci. USA, Vol 92, pp. 7877-7881, August 1995.					
	C7	Klemic, et al., "Micromolded PDMS planar electrode allows patch clamp electrical recordings from cells", Biosensors and Bioelectronics 17 (2002) 597-604.					
	C8	Fertig, et al., "Whole Cell Patch Clamp Recording Performed on Plana Glass Chip", Biophysical Journal, Volume 82, June 2002, 3056-3062.					
<b>EXAMINER:</b>					<b>DATE:</b>		

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	A4	5,137,817	8/11/1992	Busta et al.	435	173	
	A5	5,501,662	3/26/1996	Hofmann	604	20	
	A6	5,597,699	1/28/1997	Lanzara	435	7.21	
<b>FOREIGN PATENT DOCUMENTS</b>							
		<b>DOCUMENT NUMBER</b>	<b>DATE</b>	<b>COUNTRY</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>TRANSLATION YES/NO</b>
	B1	WO 90/04645	03/05/1990	PCT			Yes
	B2	WO 94/20841	15/09/1994	PCT			Yes
	B3	WO 96/10170	04/04/1996	PCT			Yes
	B4	WO 97/05922	20/02/1997	PCT			Abstract
	B5	WO 99/24110	20/05/1999	PCT			Yes
<b>OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)</b>							
	C10	Hamill, et al., "Improved Patch-Clamp Techniques for High-Resolution Current Recording from Cells and Cell-Free Membrane Patches", Pflugers Archiv (1981) 391:85, pp. 100-104.					
<b>EXAMINER:</b>					<b>DATE:</b>		

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<b>UNITED STATES PATENT DOCUMENTS</b>							
<b>EXAM. INITIAL</b>		<b>DOCUMENT NUMBER</b>	<b>DATE</b>	<b>NAME</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>FILING DATE IF APPROPRIATE</b>
	A7	US 2001/0029320	10/11/2001	Trumbull et al.	600	300	
	A8	US 2002/0076689	6/20/2002	Farb et al.	435	4	
	A9	5,449,492	9/12/1995	Krishtal	422	64	
	A10	6,193,647	2/27/2001	Beebe et al.	600	33	
	A11	6,470,226	10/22/2002	Olesen et al.	700	56	
	A12	US 2202/0146822	10/10/2002	Takayama et al.	435	375	
	A13	US 6,242,209	6/5/2001	Ransom et al.	435	29	
<b>FOREIGN PATENT DOCUMENTS</b>							
		<b>DOCUMENT NUMBER</b>	<b>DATE</b>	<b>COUNTRY</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>TRANSLATION YES/NO</b>